

Serial No. 09/601,434

Docket No. 1998/F 009 (9931*9)

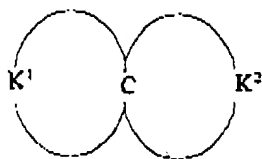
In the Claims

1-20. (cancelled)

21. (currently amended) A laser comprising:

a substrate, a bottom electrode layer,

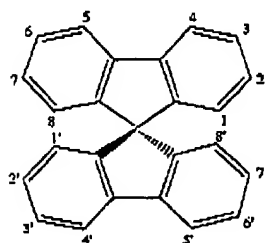
a light source operably coupled to an organic solid laser dye and capable of producing stimulated emission of the organic solid laser dye, the organic solid laser dye comprising a spiro compound of formula (I)



(I)

where K¹ and K² are, independently of one another, conjugated systems top
electrode layer and a laser cavity.

22. (previously presented) The laser of claim 21, wherein said spiro compound is a spirobifluorene of formula (II)



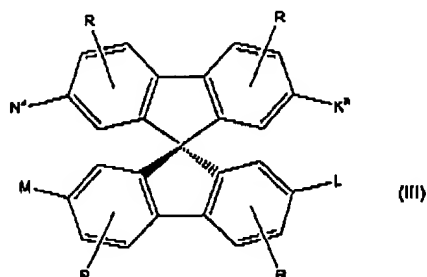
(II)

where the benzo groups can be substituted and/or fused independently of one another.

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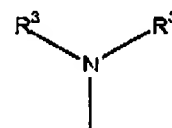
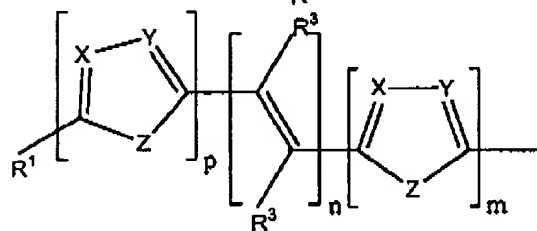
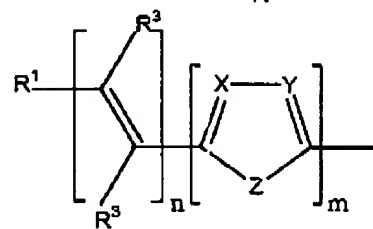
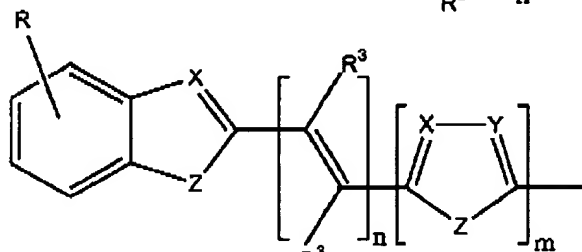
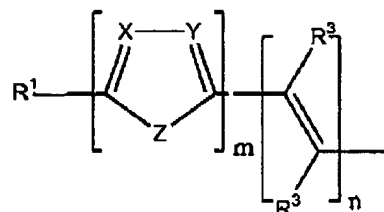
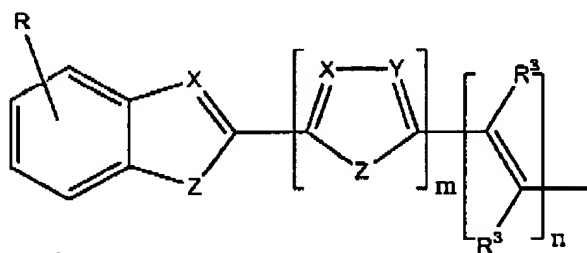
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23. (previously presented) The laser of claim 21, wherein said spiro compound is a spirobifluorene derivative of formula (III)



wherein:

R' , L , M , R'' are identical or different and are



R is identical or different and has the same meaning as R' , L , M , R'' or is H, a linear or branched alkyl, alkoxy or ester group having from 1 to 22 carbon atoms, $-CN$, $-NO_2$, $-NR^2R^3$, $-Ar$ or $-O-Ar$;

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Ar is phenyl, biphenyl, 1-naphthyl, 2-naphthyl, 2-thienyl, or 2-furyl, with each optionally substituted with one or two radicals R;

m, n, p are 0, 1, 2 or 3;

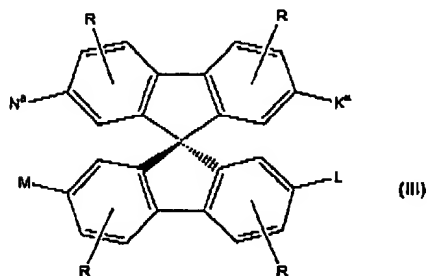
X, Y are identical or different and are CR or nitrogen;

Z is -O-, -S-, -NR¹-, -CR¹R⁴-, -CH=CH-, or -CH=N-;

R¹, R⁴ are identical or different and have the same meaning as R; and

R², R³ are identical or different and are H, a linear or branched alkyl group having from 1 to 22 carbon atoms, -Ar, or 3-methylphenyl.

24. (previously presented) The laser of claim 21, wherein said spiro compound is a spirobifluorene compound selected from the group consisting of the spirobifluorene compounds of the formula (IIIa) to (IIIg), wherein formula (III) is:

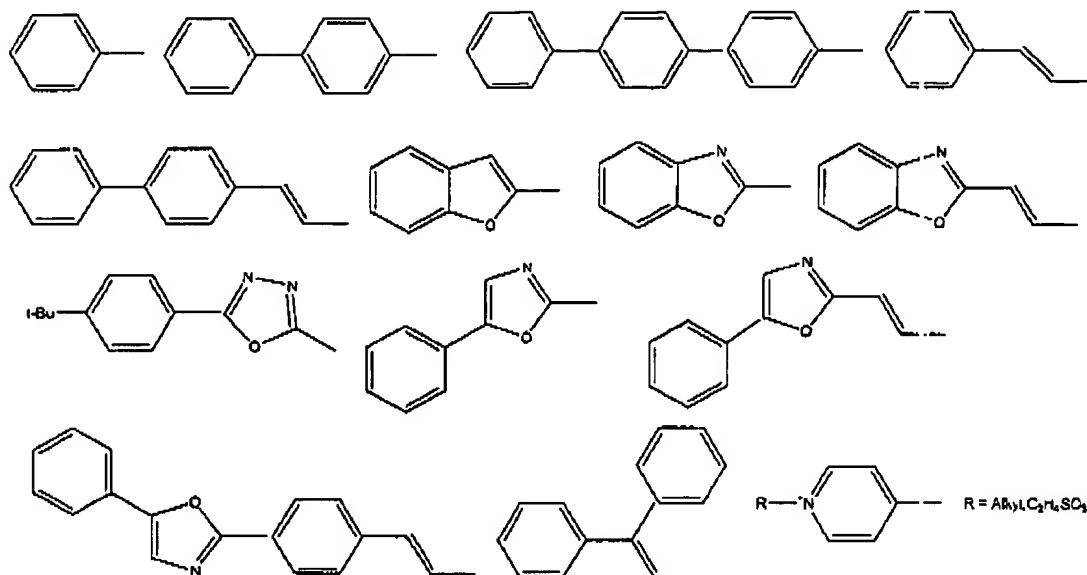


and the spirobifluorene compounds (IIIa to IIIg) are derivatives of formula (III) as follows:

IIIa) K^a = L = M = N^a and is selected from the group consisting of:

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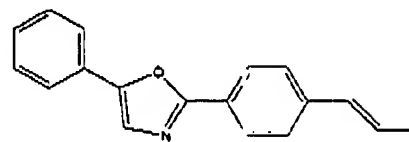
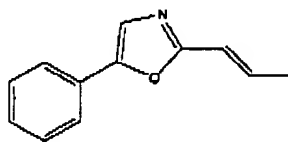
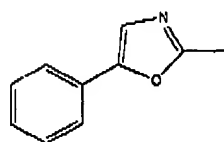
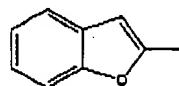
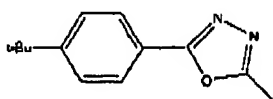
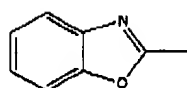
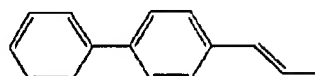
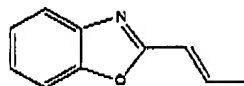
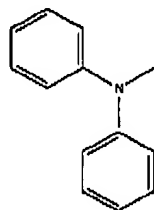
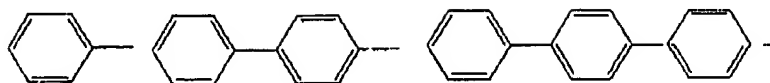
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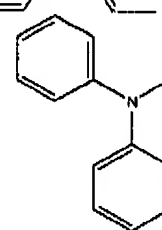
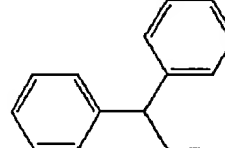
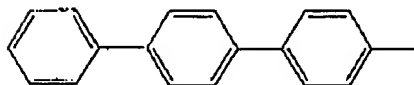
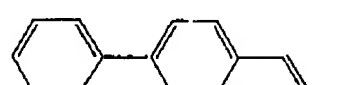
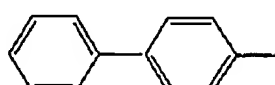
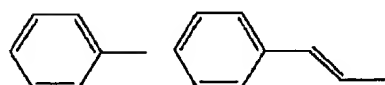
IIIb) $K^u = M = H$ and $Na = L$ and is selected from the group consisting of:

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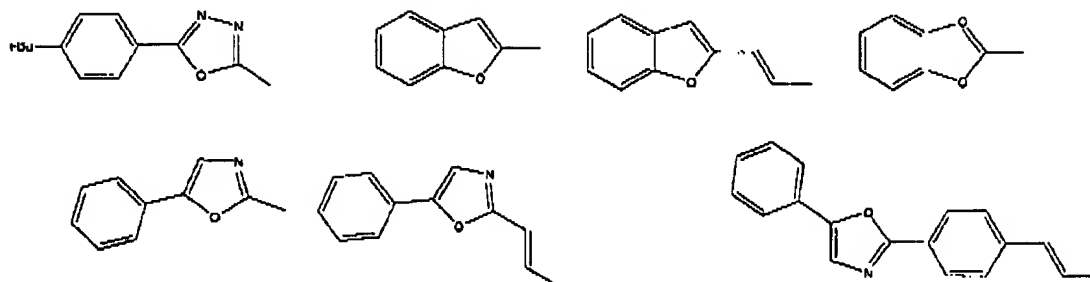
IIIc) $K^a = M$ and is selected from the group consisting of:



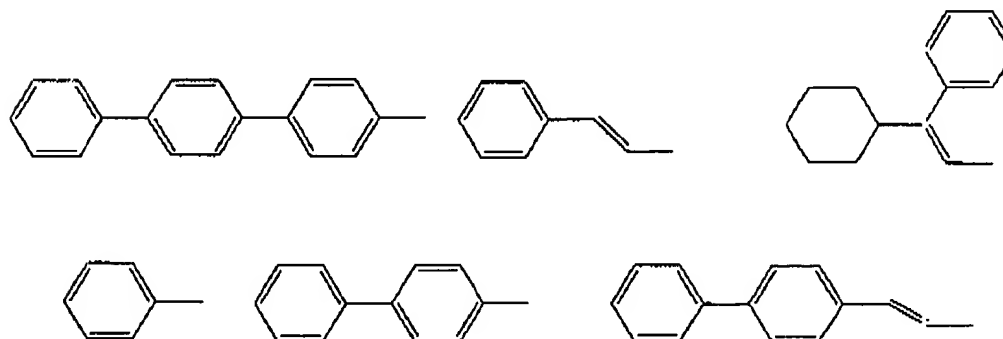
and $N^a = L$ and is selected from the group consisting of:

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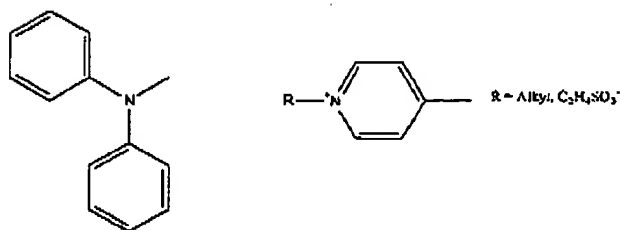
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III d) $K^a = M$ and is selected from the group consisting of:



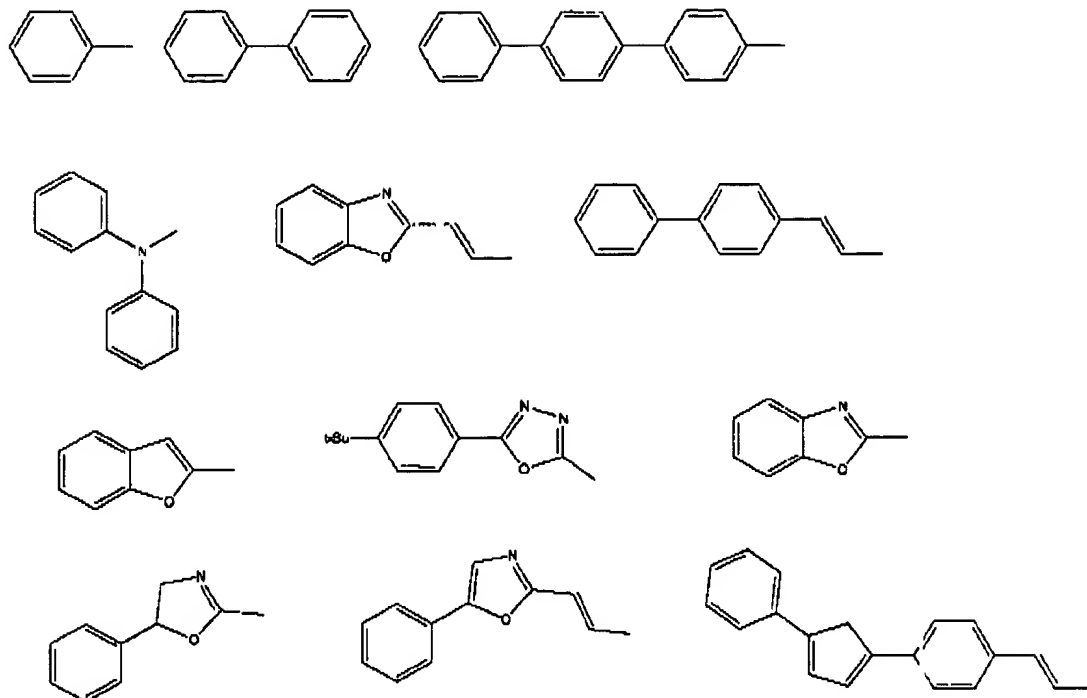
and $N^a = L$ and is selected from the group consisting of:



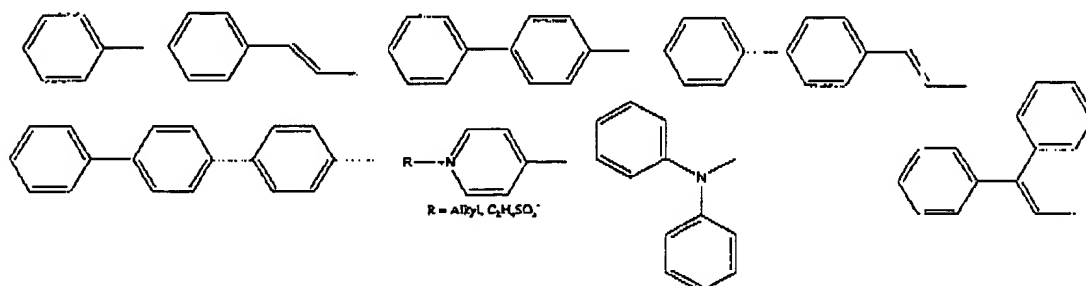
III e) $K^a = L = H$ and $M = Na$ and is selected from the group consisting of:

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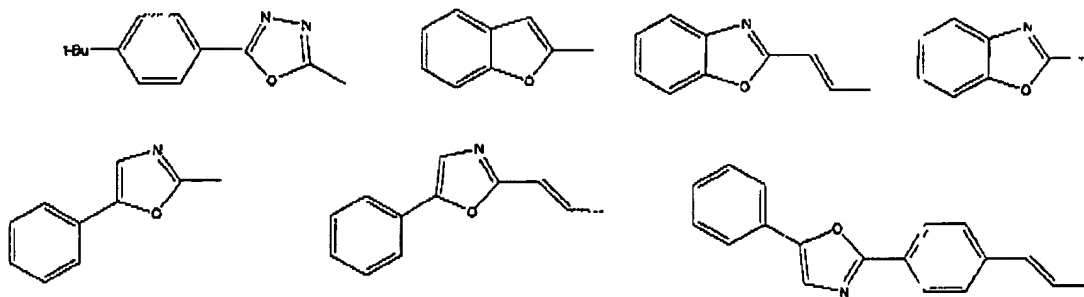
III f) $K_a = L$ and is selected from the group consisting of:



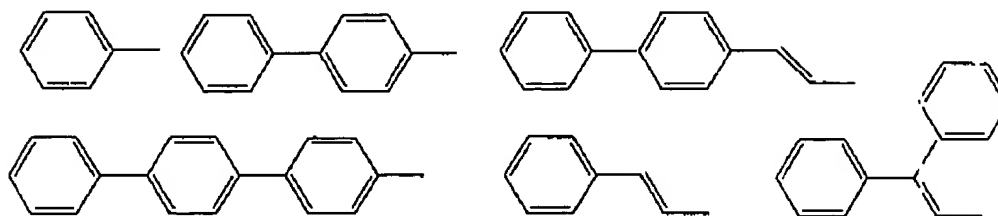
and $M = N^a$ and is selected from the group consisting of:

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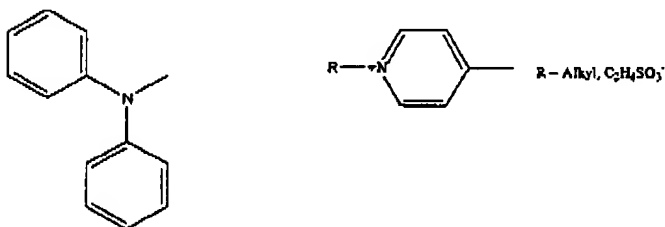
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IIIg) $K^a = L$ and is selected from the group consisting of:



and $M = N^a$ and is selected from the group consisting of:

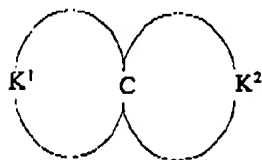


25. (previously presented) The laser of claim 21, wherein the light source is selected from the group consisting of a flash lamp and a laser.
26. (previously presented) The laser of claim 21, wherein the light source is a laser.
27. (currently amended) A method of producing coherent laser emission comprising subjecting an organic solid laser dye to a light source wherein said light source

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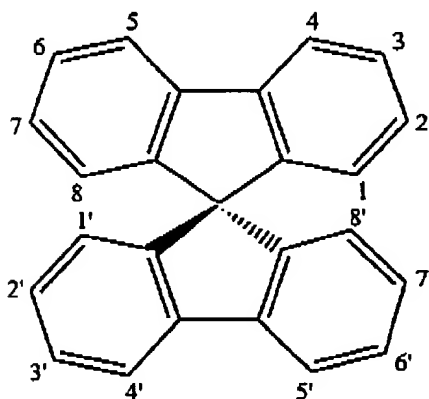
is used to excite the organic solid laser dye to emit radiation, the organic solid laser dye comprising a solid spiro compound of formula (I)



(I)

where K¹ and K² are, independently of one another, conjugated systems.

28. (previously presented) The method of claim 27, wherein said solid spiro compound is a spirobifluorene of formula (II)



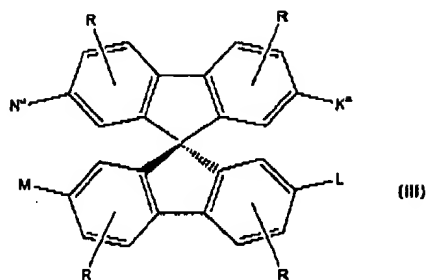
(II)

where the benzo groups can be substituted and/or fused independently of one another.

29. (previously presented) The method of claim 27, wherein said spiro compound is a spirobifluorene derivative of formula (III)

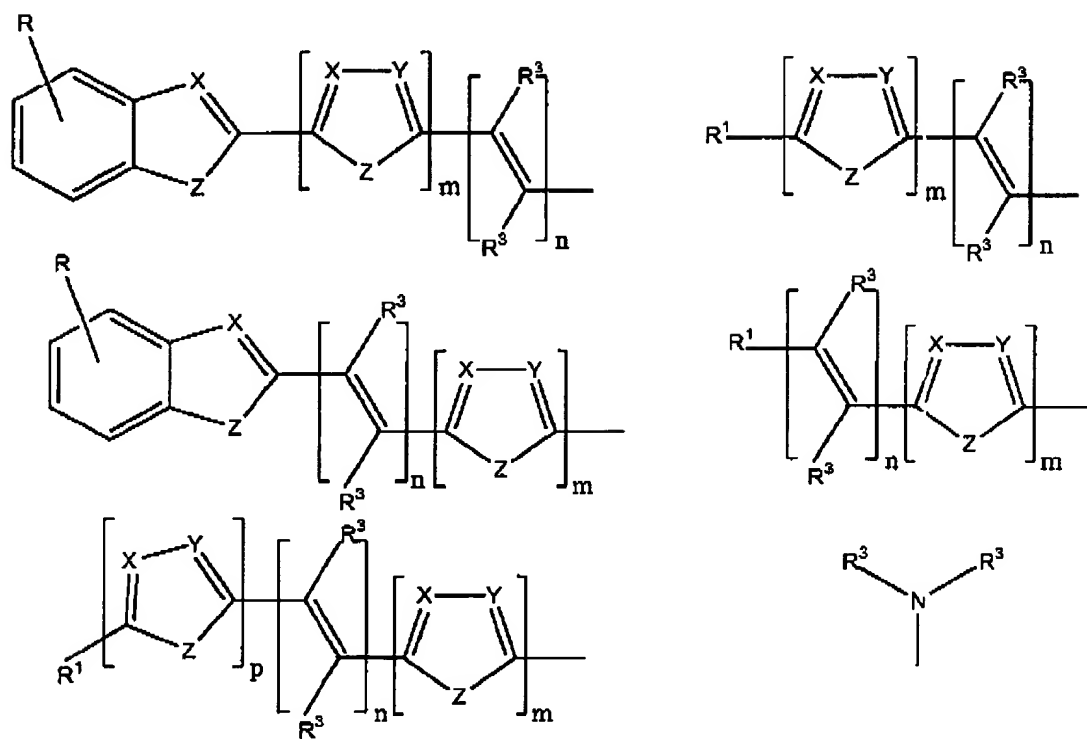
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wherein:

K^a , L , M , N^a are identical or different and are



R is identical or different and has the same meaning as K^a , L , M , N^a or is H , a

linear or branched alkyl, alkoxy or ester group having from 1 to 22 carbon atoms,

$-CN$, $-NO_2$, $-NR^2R^3$, $-Ar$ or $-O-Ar$;

Ar is phenyl, biphenyl, 1-naphthyl, 2-naphthyl, 2-thienyl, or 2-furyl, with each

optionally substituted with one or two radicals R ;

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m, n, p are 0, 1, 2 or 3;

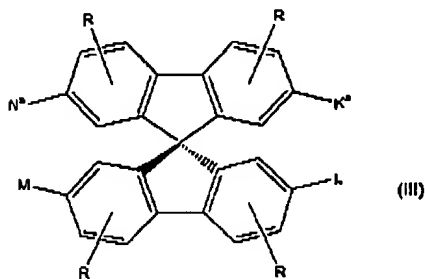
X, Y are identical or different and are CR or nitrogen;

Z is -O-, -S-, -NR¹-, -CR¹R⁴-, -CH=CH-, or -CH=N-;

R¹, R⁴ are identical or different and have the same meaning as R; and

R², R³ are identical or different and are H, a linear or branched alkyl group having from 1 to 22 carbon atoms, -Ar, or 3-methylphenyl.

30. (previously presented) The method of claim 27, wherein said spiro compound is a spirobifluorene compound selected from the group consisting of the spirobifluorene compounds of the formula (IIIa) to (IIIg), wherein formula (III) is:

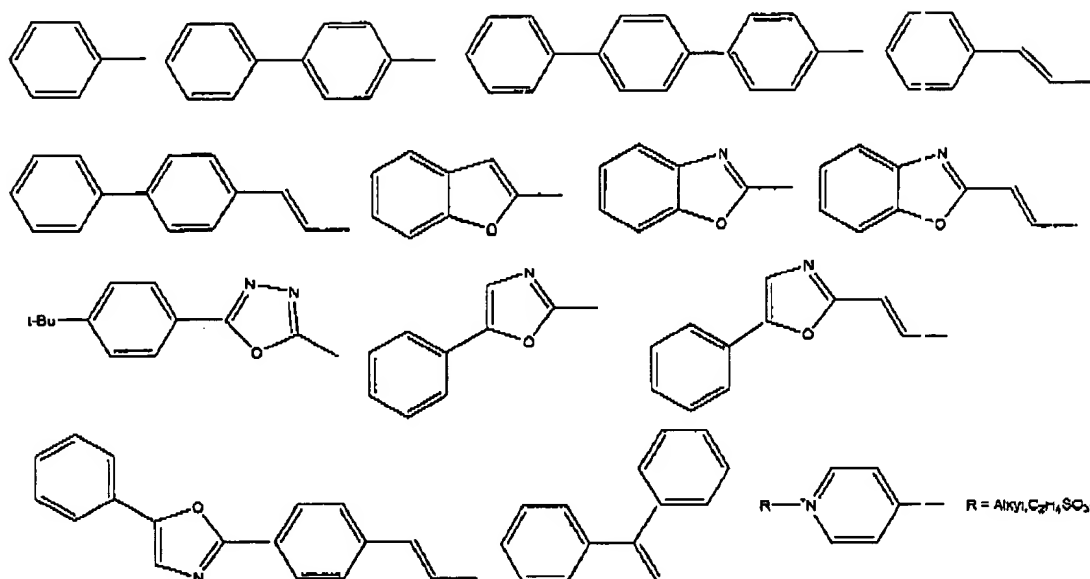


and the spirobifluorene compounds (IIIa to IIIg) are derivatives of formula (III) as follows:

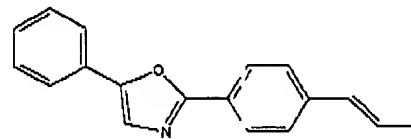
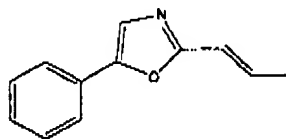
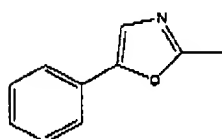
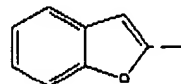
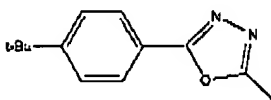
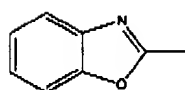
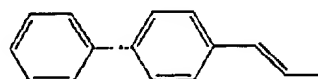
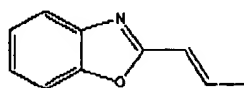
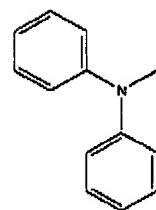
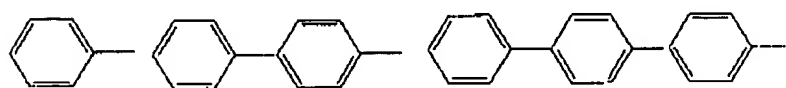
IIIa) K^a = L = M = Na and is selected from the group consisting of:

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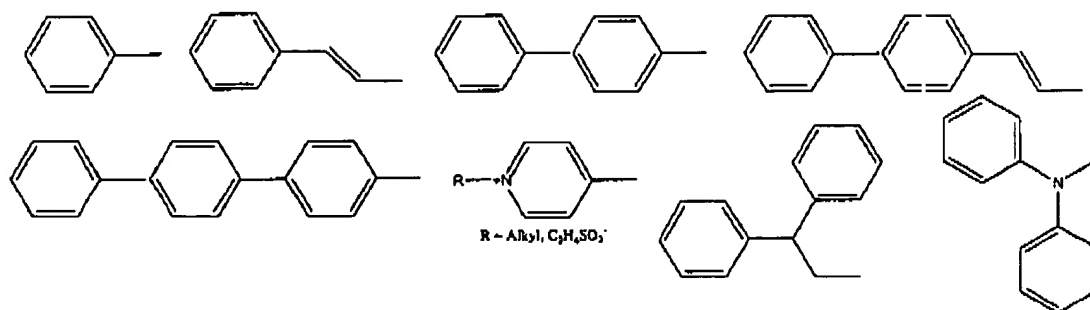
(Ib) Ka = M = H and Na = L and is selected from the group consisting of:



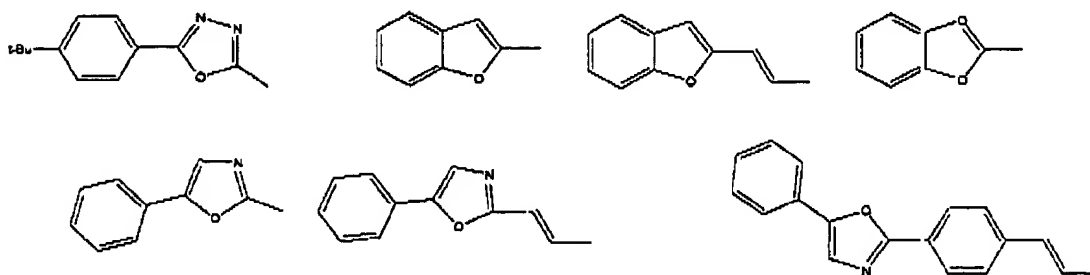
(Ic) Ka = M and is selected from the group consisting of:

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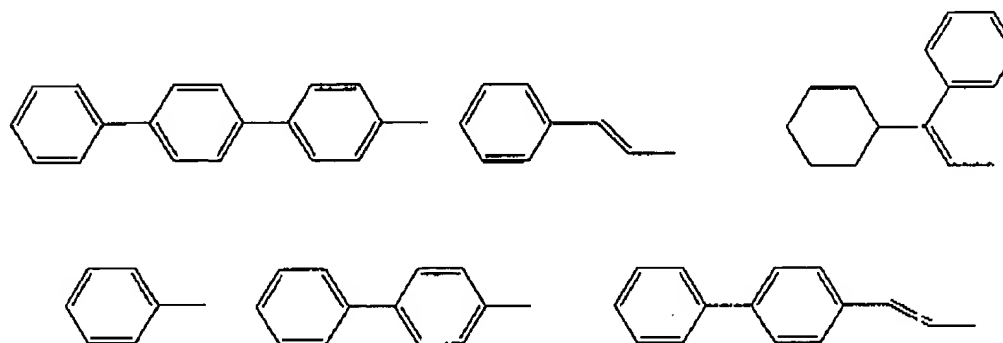
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and N^a = L and is selected from the group consisting of



IIId) K^a = M and is selected from the group consisting of:

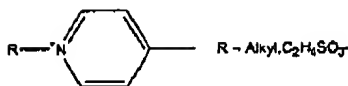
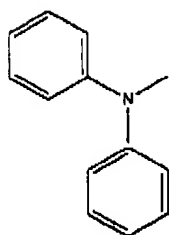


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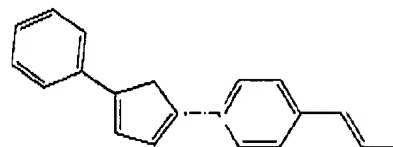
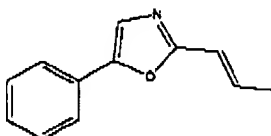
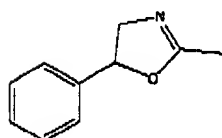
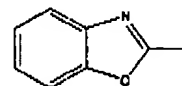
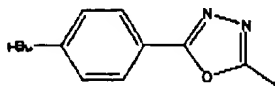
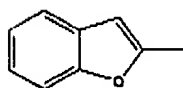
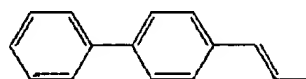
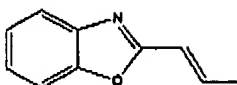
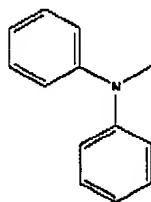
and N^a = L and is selected from the group consisting of:

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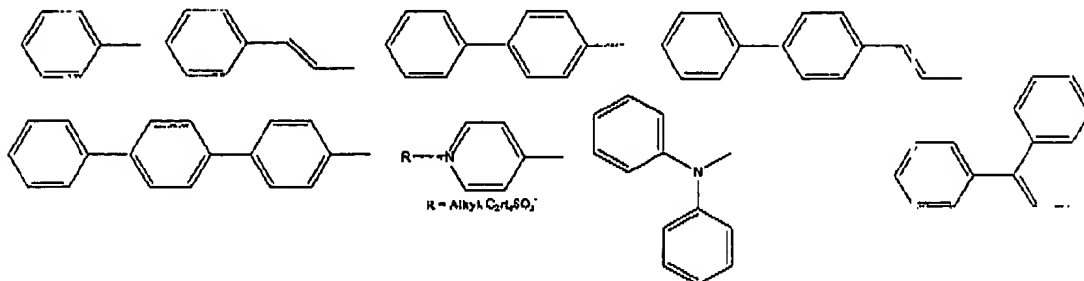
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IIIe) $K^a = L = H$ and $M = N^a$ and is selected from the group consisting of:



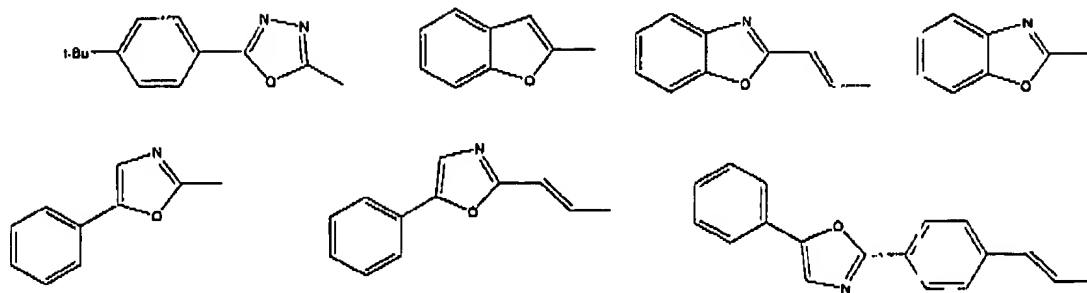
III f) $K^a = L$ and is selected from the group consisting of:



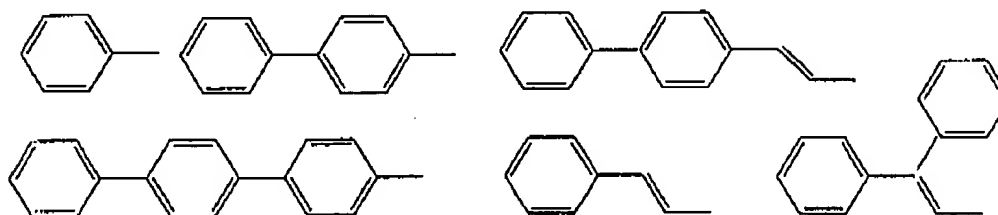
and $M = N^a$ and is selected from the group consisting of

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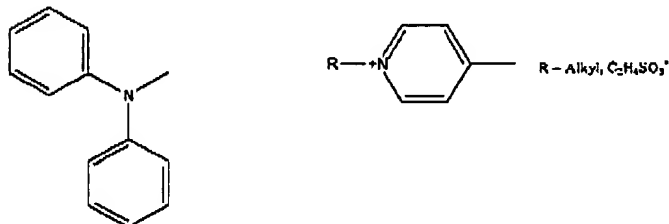
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IIIg) $K^a = L$ and is selected from the group consisting of:



and $M = N^a$ and is selected from the group consisting of:



31. (previously presented) The method of claim 27 wherein the light source is a laser or a flash lamp.

32. (previously presented) The method of claim 31 wherein the light source is a laser.